



## 26.0 Millhaus

3070 Terry Lake Road | Fort Collins, Colorado

## Southwest Study

February 28 | 2018

Greg D. Fisher | Architect



West



East











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## 26.0 Millhaus

3070 Terry Lake Road | Fort Collins, Colorado

## Southeast Study

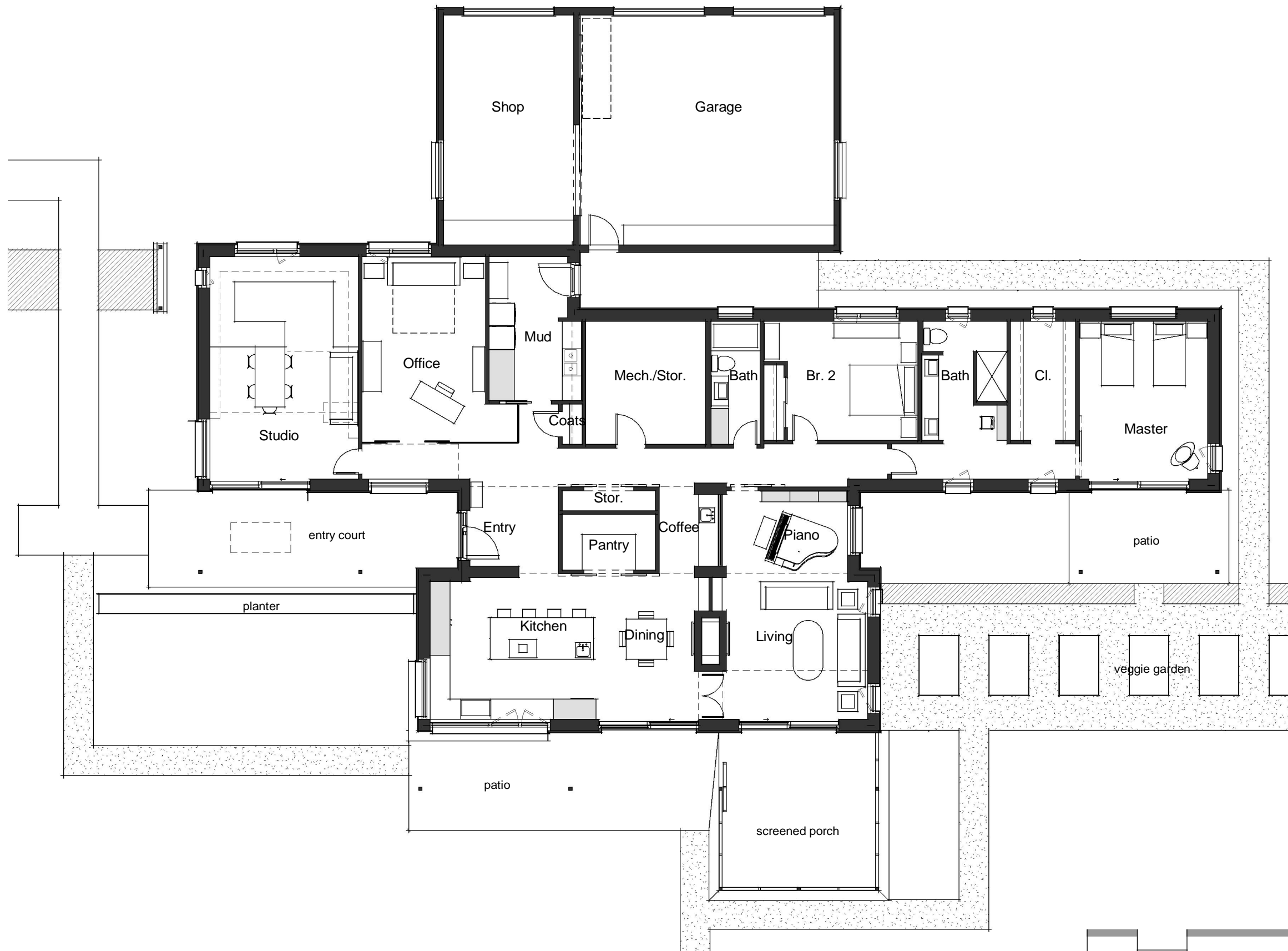
February 28 | 2018

Greg D. Fisher | Architect





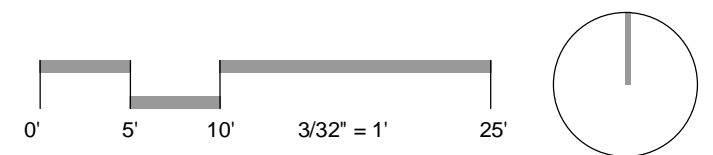




Area (Gross Building)

Main Level	3137 SF
Attic	116 SF
Total	3254 SF

\*PH Wall Area Impact: 204 sf (3050 sf)



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## Main Level

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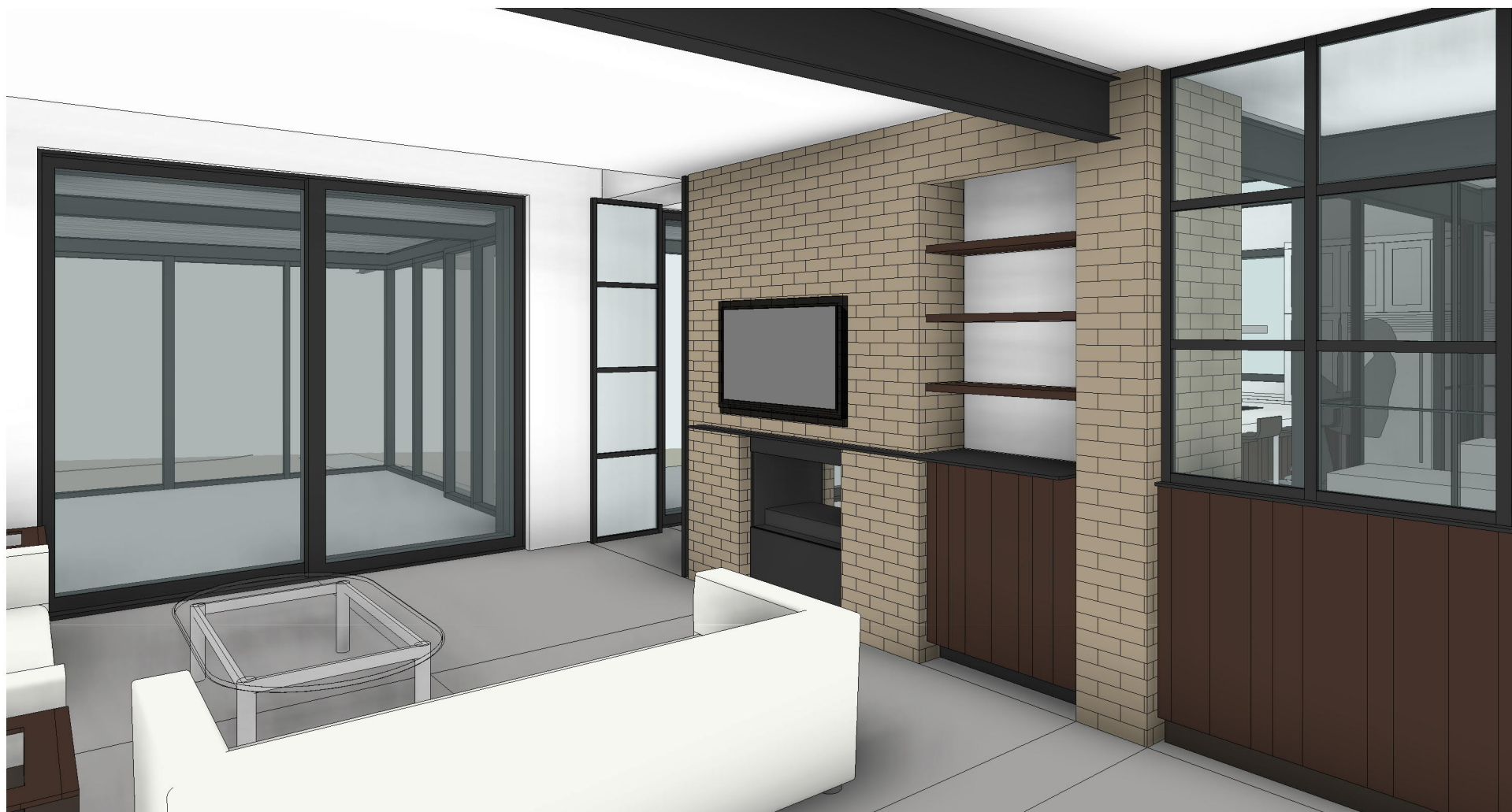








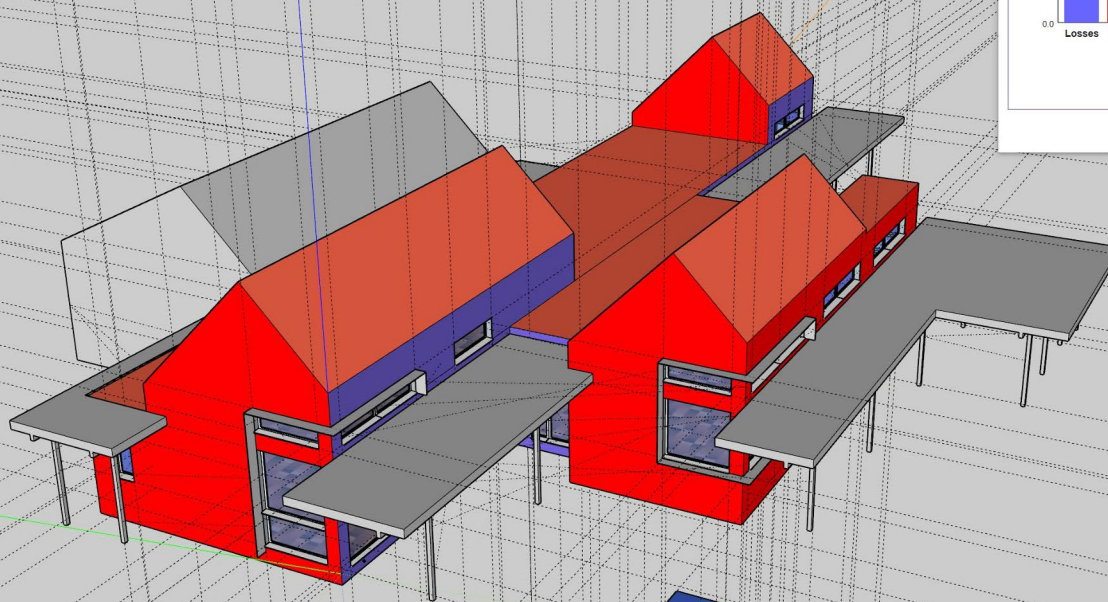




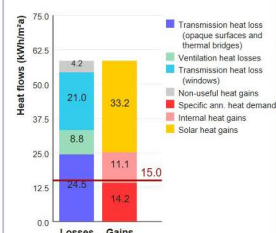




Climate: Denver  
 Building type: Dwelling  
 14.2 kWh/m²a  
 TFA 266 m² (Direct entry)  
 Heat Loss Form Factor 3.18  
 WARNING! Cross-check of total heat-loss surface areas does not match!



### Heat balance



### Project overview

Climate	Denver	<a href="#">change</a>
Building type	Dwelling	<a href="#">change</a>
Annual heat demand (Q <sub>h</sub> )	14.2 kWh/m²a	<a href="#">details</a>
Treated Floor Area (TFA)	266 m² (Direct entry)	<a href="#">details</a>
Thermal envelope area	845 m²	<a href="#">details</a>
Heat Loss Form Factor	3.18	
Projected building footprint	290 m²	
Number of windows	56	<a href="#">details</a>
Number of thermal surfaces	31	<a href="#">details</a>
Number of thermal bridges	None defined	<a href="#">details</a>

### Thermal envelope checks

The thermal envelope appears to be incomplete!  
 This may be caused by incorrectly assigned non-thermal surfaces, reversed faces, a hole, glued components, or unintersected faces in the envelope!

Projection along Blue axis:	0.0% variance
Projection along Red axis:	53.8% variance
Projection along Green axis:	3.7% variance

### Render mode

Render by Area Group

Select

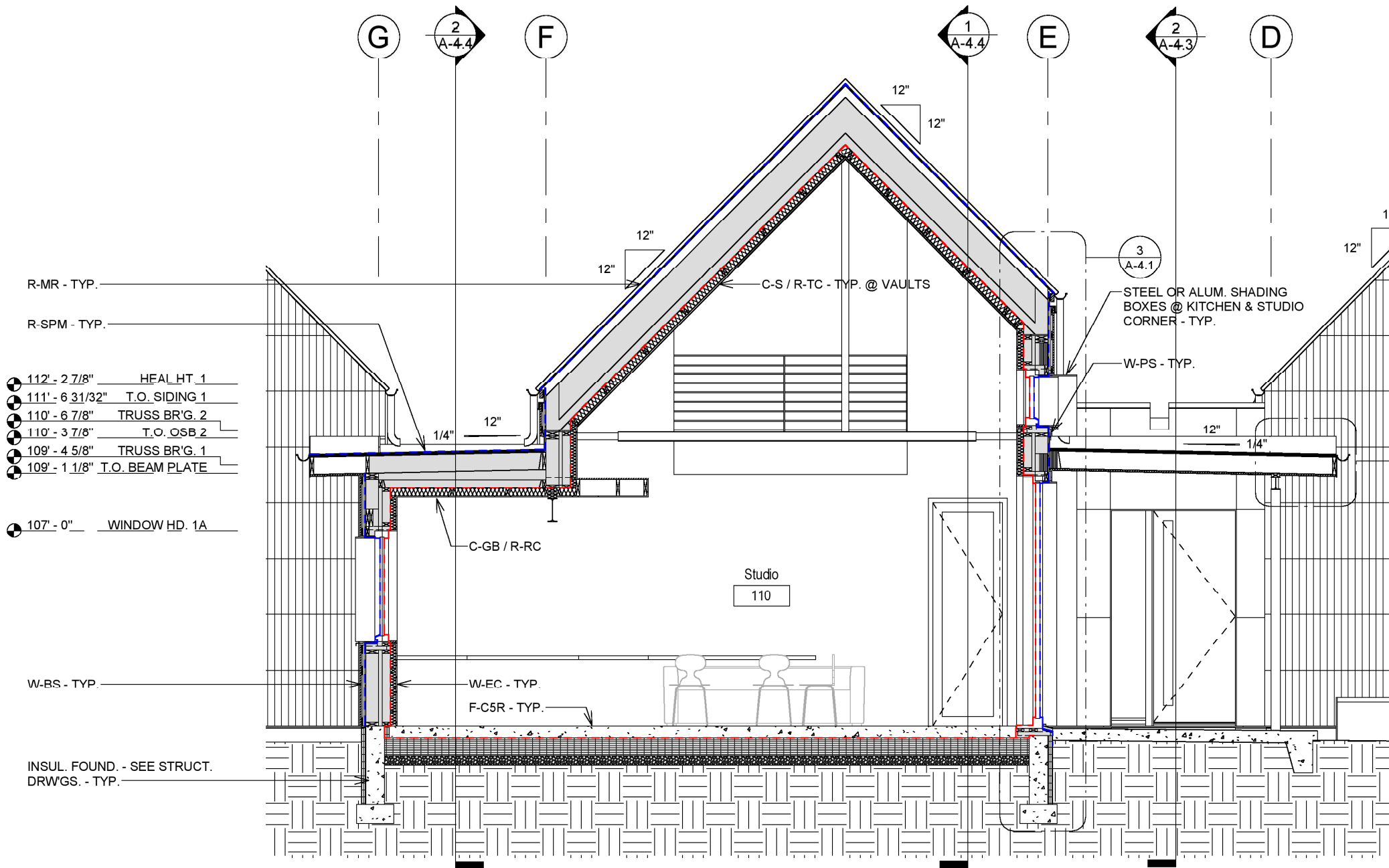
Colors

Components

- Styles
- Shadows
- Instructor
- Layers

Name

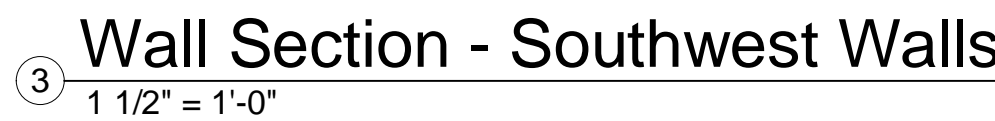
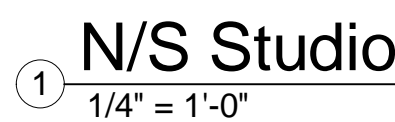
- Layer0
- TFA
- Shading
- Sections
- Elevations
- Volume
- Windows
- Model
- Overhangs
- Plans
- Site



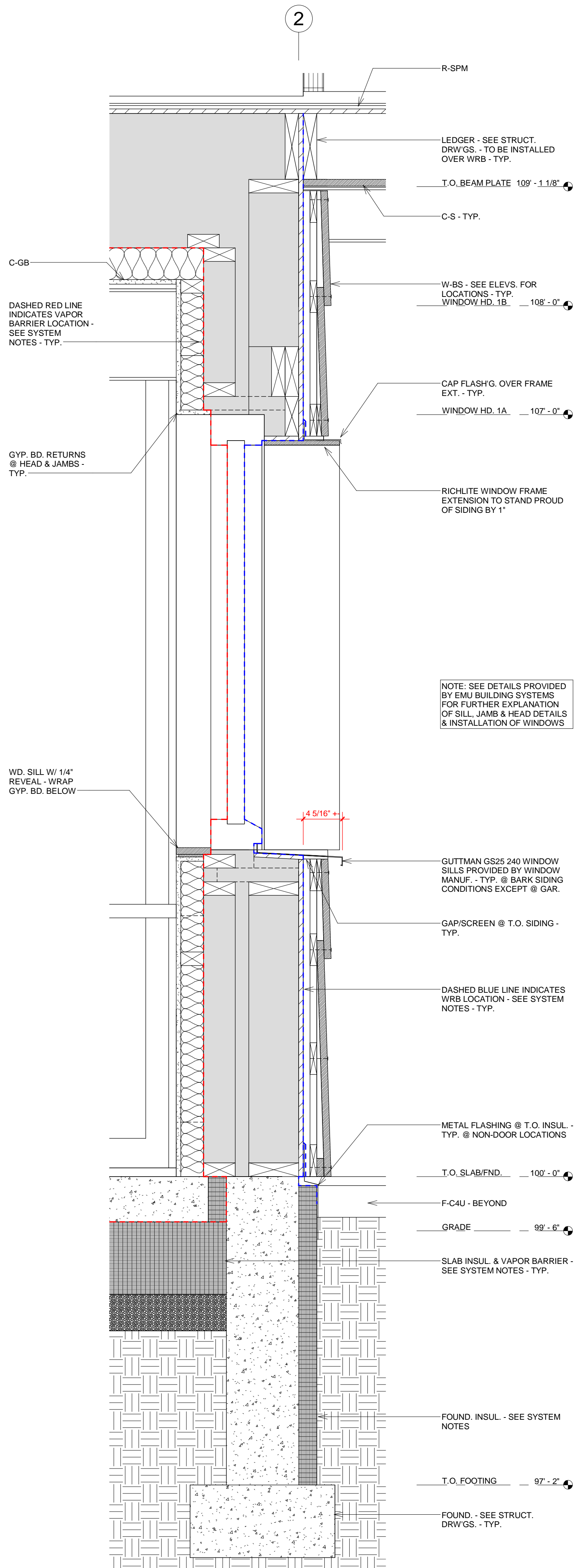
# 1 N/S Studio 1/4" = 1'-0"



2. ALL DIMENSIONS ARE TO OUTSIDE FACE OF CONC., FACE OF MASONRY, FACE OF STUD UNLESS INDICATED WITH A REFERENCE (P) SYMBOL OR UNLESS NOTED OTHERWISE.
3. SEE WALL SECTIONS FOR FURTHER DIMENSIONAL RELATIONSHIPS.
4. ALL EXCESS MATERIALS ARE TO BE DIVERTED FROM THE LANDFILL WHEREVER POSSIBLE.
5. INSTALL ALL PRODUCTS PER MANUFACTURERS RECM'TS.
6. COORDINATE ALL INTERIOR FINISH & FIXTURE SELECTIONS W/ OWNER/ARCHITECT.
7. COORDINATE ALL EXTERIOR FINISH SELECTIONS W/ OWNER/ARCHITECT.



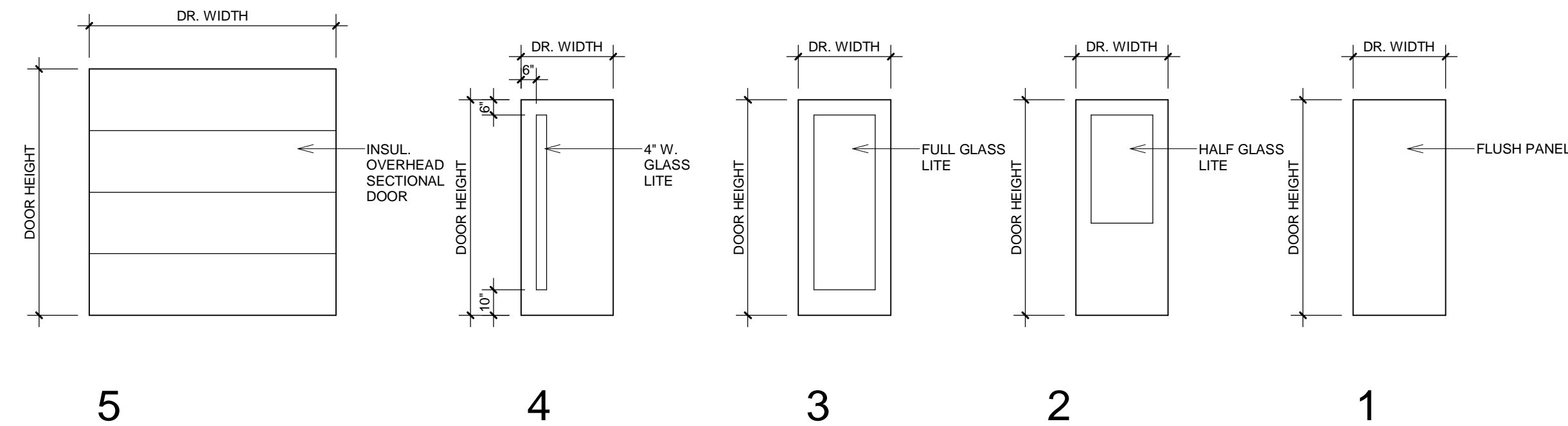




② Wall Section - Typ.

1 1/2" = 1'-0"

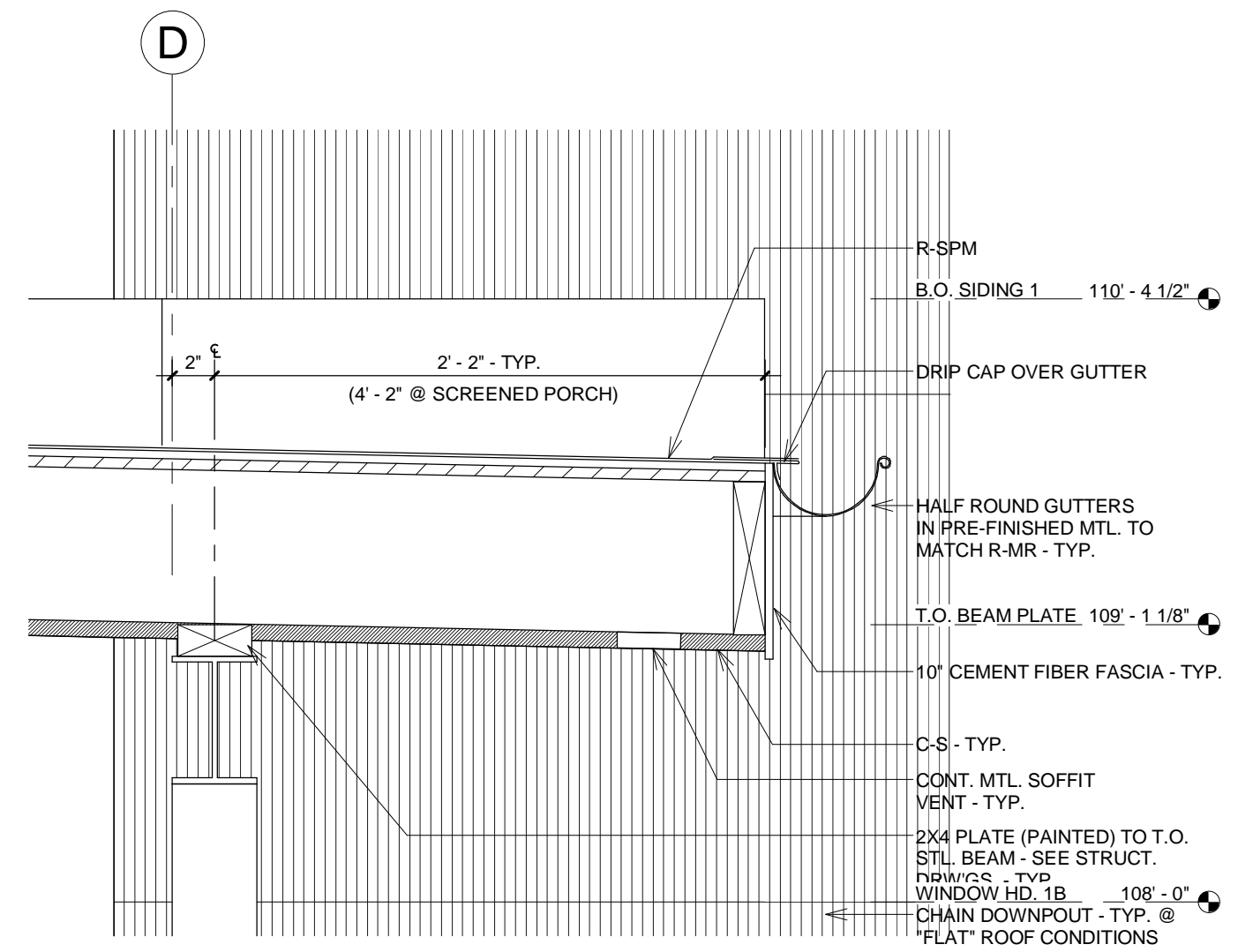
Door Schedule								
Door Number	Operation	Door			Door Type	Hardware	Frame	Comments
		Width	Height	Material			Material	
101	Swing	5'-0"	8'-0"	Clad Wood	4	By Door Manuf.	Clad Wood	42" w. door / 18" sidelite
104	Lift & Slide	10'-0"	9'-0"	Clad Wood	3	By Door Manuf.	Clad Wood	
106	Lift & Slide	10'-0"	9'-0"	Clad Wood	3	By Door Manuf.	Clad Wood	
107	Barn	2'-8"	7'-0"	Wood	1	Barn Door Track/Rollers & Pulls	Wood	
108	Barn	5'-0"	7'-0"	Wood	1	Barn Door Track/Rollers & Pulls	Wood	
110A	Lift & Slide	10'-0"	9'-0"	Clad Wood	3	By Door Manuf.	Clad Wood	
110B	Swing	2'-6"	8'-0"	Wood	3	Office Lockset, Hinges	Wood	
112A	Swing	3'-6"	7'-0"	Clad Wood	3	By Door Manuf.	Clad Wood	
112B	Pocket	2'-6"	8'-0"	Wood	1	Pocket Door Track & Pulls	Wood	
113	Swing	2'-6"	8'-0"	Wood	1	Passage Lockset, Hinges	Wood	
114	Swing	3'-0"	8'-0"	Wood	1	Passage Lockset, Hinges	Wood	
115	Swing	2'-4"	8'-0"	Wood	1	Privacy Lockset, Hinges	Wood	
116	Swing	2'-6"	8'-0"	Wood	1	Privacy Lockset, Hinges	Wood	
117	Bi-Pass - 2 Panels	5'-0"	8'-0"	Wood	1	Track/Rollers & Pulls	Wood	
118	Swing	2'-6"	8'-0"	Wood	1	Privacy Lockset, Hinges	Wood	
121A	Lift & Slide	10'-0"	9'-0"	Clad Wood	3	By Door Manuf.	Clad Wood	
121B	Barn	3'-0"	8'-0"	Wood	1	Barn Door Track/Rollers & Pulls	Wood	
122A	Overhead	9'-1"	8'-0 3/4"	Metal	5	Track/Rollers & Operator by Door Manuf.	Wood	Door to be insulated
122B	Barn	9'-0"	8'-0"	Metal	1	Barn Door Track/Rollers & Pulls	Wood	Door to be insulated
123A	Overhead	9'-1"	8'-0 3/4"	Metal	5	Track/Rollers & Operator by Door Manuf.	Wood	Door to be insulated
123B	Overhead	9'-1"	8'-0 3/4"	Metal	5	Track/Rollers & Operator by Door Manuf.	Wood	Door to be insulated
123C	Swing	3'-0"	7'-0"	Metal	5	Entrance Lockset, Self-closing Hinges, Weatherstripping	Wood	Door to be insulated



⑤ Door Types

1/4" = 1'-0"

Room Schedule									
Room Number	Room Name	Floor	Base	Wall Material	Wall Finish	Ceiling Material	Ceiling Finish	Ceiling Height	Comments
101	Entry	Polished Conc.	Steel	Gyp. Bd. / Brick	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
102	Pantry	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
103	Kitchen	Polished Conc.	Steel	Gyp. Bd. / Brick	Paint	Wd. Siding	Seal		
104	Dining	Polished Conc.	Steel	Gyp. Bd. / Brick	Paint	Wd. Siding	Seal		
105	Coffee	Polished Conc.	Steel	Gyp. Bd. / Brick	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
106	Living	Polished Conc.	Steel	Gyp. Bd. / Brick	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
107	Plan	Polished Conc.	Steel	Gyp. Bd. / Brick	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
108	Stor.	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
109	Hall	Polished Conc.	Steel	Gyp. Bd. / Brick	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
110	Studio	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd. / Wd. Siding	Paint / Seal		
111	Office	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
112	Mud	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
113	Coats	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
114	Mech./Stor.	Polished Conc.	None	Plywd.	Unfinished	Gyp. Bd.	Paint	9' - 0 5/8"	
115	Bath	Polished Conc.	Steel/Tile	Gyp. Bd. / Tile	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
116	Br. 2	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
117	Cl.	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
118	Hall	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
119	Bath	Polished Conc.	Steel/Tile	Gyp. Bd. / Tile	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
120	Cl.	Polished Conc.	Steel	Gyp. Bd.	Paint	Gyp. Bd.	Paint	9' - 0 5/8"	
121	Master	Polished Conc.	Steel	Gyp. Bd.	Paint	Wd. Siding	Seal		
122	Shop	Sealed Conc.	None	Gyp. Bd.	Paint	Gyp. Bd.	Paint	10' - 6 7/8"	
123	Garage	Sealed Conc.	None	Gyp. Bd.	Paint	Gyp. Bd.	Paint	10' - 7 1/8"	
201	Storage	Sealed OSB	Steel	Gyp. Bd.	Paint	Wd. Siding	Seal		



① Detail - Overhang

1 1/2" = 1'-0"

## SYSTEM NOTES:

### FLOORS:

**F-CSR (CONCRETE - 4" REINFORCED):**  
 - 5" POLISHED CONCRETE SLAB W/ RADIANT HEATING  
 - #4 REBAR MATT @ 24" O.C. ABOVE RADIANT  
 - 6X6 10/10 W.W.F. BELOW RADIANT  
 - INSUL. PER SYSTEM NOTES BELOW  
 - SUBGRADE PER SOILS REPORT REQMTS.  
**F-CAU (CONCRETE - 4" UN-REINFORCED):**  
 - 4" CONCRETE SLAB  
 - COLORED & ARCHITECTURALLY SCORED WHERE INDICATED  
 - SUBGRADE PER SOILS REPORT REQMTS.

### F-OSB

- SEALED OSB DECKING OVER FLOOR FRAMING PER STRUCT. DRWGS.

### WALLS:

**W-BB (BARK SIDING):**  
 - 26" BARK SIDING BY BARKHOUSE  
 - 1X4 HORIZ. BATTS @ 24" O.C.  
 - 1X4 VERT. BATTS @ WALL STUD SPACING  
 - WALL TYPE W-EC OR W-ES

### W-BV (BRICK VENEER):

- BRICK VENEER  
 - 1/2" OSB  
 - 2X4 STUDS @ 16" O.C.

### W-EC (EXTERIOR CONDITIONED):

- SIDING TYPE PER ELEVATIONS OR 1/2" GYP. BD. @ HOUSE TO SHOP WALL  
 - WEATHER BARRIER PER SYSTEM NOTES BELOW (NOT REQD. @ HOUSE TO SHOP WALL)  
 - 1/2" OSB SHEATHING (NOT REQD. @ SHOP)  
 - 2X6 STUDS @ 16" O.C.  
 - 1 1/2" GAP  
 - 2X4 STUDS @ 24" O.C.

### W-ES (EXTERIOR SEMI-CONDITIONED):

- SIDING TYPE PER ELEVATIONS OR 1/2" GYP. BD. @ HOUSE TO SHOP WALL  
 - WEATHER BARRIER PER SYSTEM NOTES BELOW (NOT REQD. @ HOUSE TO SHOP WALL)  
 - 1/2" OSB SHEATHING (NOT REQD. @ SHOP)  
 - 2X6 STUDS @ 16" O.C.  
 - 1 1/2" GAP  
 - 2X4 STUDS @ 24" O.C.

### W-PS (PANEL SIDING):

- PANEL SIDING  
 - 1X4 VERT. BATTS @ WALL STUD SPACING  
 - WALL TYPE W-EC OR W-ES

### W-WS (EXTERIOR SEMI-CONDITIONED):

- SIDING TYPE PER ELEVATIONS  
 - WEATHER BARRIER PER SYSTEM NOTES BELOW  
 - 1/2" OSB SHEATHING  
 - 2X6 STUDS @ 16" O.C.  
 - VAPOR BARRIER PER SYSTEM NOTES BELOW  
 - 1/2" GYP. BD.  
 - INSUL. PER SYSTEM NOTES BELOW

### W-W4 (INTERIOR - 2X4):

- 1/2" GYP. BD. TO FINISHED SIDES OR 1/2" DUROCK @ WET AREAS

### W-W6 (INTERIOR - 2X6):

- 1/2" GYP. BD. TO FINISHED SIDES OR 1/2" DUROCK @ WET AREAS

### W-PS (PANEL SIDING):

- PANEL SIDING  
 - 1X4 VERT. BATTS @ WALL STUD SPACING  
 - WALL TYPE W-EC OR W-ES

### CEILINGS / SOFFITS:

### C-S (SIDING):

- SIDING  
 - CONTINUOUS GALV. STEEL VENTING @ EXT.  
 - ROOF FRAMING PER STRUCT. DRWGS. & ARCH. SECTIONS

### C-GB (GYPSUM BOARD):

- 1/2" GYPSUM BOARD  
 - ROOF, FLOOR OR SERVICE CAVITY FRAMING PER STRUCT. DRWGS. & ARCH. SECTIONS

### ROOFS:

### R-CTF (CORRUGATED TRANSLUCENT FIBERGLASS):

- CORRUGATED TRANSLUCENT FIBERGLASS PANELS  
 - 2X6 RAFTERS @ 24" O.C.

### R-MR (METAL ROOF):

- 24 GA. PRE-FINISHED STANDING SEAM METAL ROOFING INSTALLED PER MANUF. REQMTS.  
 - CONTINUOUS ICE & WATER UNDERLAYMENT  
 - ROOF FRAMING & CEILING TYPE PER STRUCT. DRWGS. & ARCH. SECTIONS

### R-RC (RAFTERS CONDITIONED):

- RAFTERS @ 24" O.C. PER STRUCT. DRWGS. & ARCH. SECTIONS  
 - 2X4 CEILING JOISTS @ 24" O.C.  
 - VAPOR BARRIER PER SYSTEM NOTES BELOW  
 - 2X4 PURLINS @ 24" O.C. (SERVICE CAVITY)  
 - INSUL. PER SYSTEM NOTES BELOW

### R-SPM (SINGLE PLY MEMBRANE):

- TPO MEMBRANE SYSTEM  
 - 1/4" DENSEDECK SUBSTRATE BOARD PRIMER  
 - ROOF FRAMING & CEILING TYPE PER STRUCT. DRWGS. & ARCH. SECTIONS

### R-TC (TRUSSES CONDITIONED):

- PRE-ENG'D. PARALLEL OR CONVENTIONAL TRUSSES @ 24" O.C. PER STRUCT. DRWGS. & ARCH. SECTIONS  
 - VAPOR BARRIER PER SYSTEM NOTES BELOW  
 - 2X4 PURLINS @ 24" O.C. (SERVICE CAVITY)  
 - INSUL. PER SYSTEM NOTES BELOW

### R-TS (TRUSSES SEMI-CONDITIONED):

- PRE-ENG'D. CONVENTIONAL TRUSSES @ 24" O.C. PER STRUCT. DRWGS. & ARCH. SECTIONS  
 - VAPOR BARRIER PER SYSTEM NOTES BELOW  
 - INSUL. PER SYSTEM NOTES BELOW

### R-U (UNCONDITIONED RAFTERS OR TRUSSES):

- ROOF FRAMING & CEILING TYPE PER STRUCT. DRWGS. & ARCH. SECTIONS

### THERMAL & MOISTURE RESISTANCE:

### FOUNDATION INSULATION:

- DAMPROOFING  
 - 2" EPS (R-10)

### SLAB INSULATION:

- POLY VAPOR BARRIER W/ ALL JOINTS TAPED  
 - 8" EPS (R-40) @ HOUSE / 6" EPS @ SHOP

### WALL/ROOF CAVITY INSULATION:

- DENSE-PACK FIBERGLASS OUTSIDE VB - 10 1/2" @ CONDITIONED WALLS (R-42), 5 1/2" @ SEMI-CONDITIONED WALLS (R-22), 14" @ ROOFS (R-56)  
 - MINERAL WOOL BATTS @ SERVICE CAVITIES - 2 1/2" @ WALLS (R-8), 3 1/2" @ CEILINGS (R-12)

### ATTIC INSULATION:

- LOOSE-FILL FIBERGLASS (R-80)  
 - WEATHER RESISTIVE BARRIER (WRB):  
 - SIGA MAJVEST OR SOLITEX MENTO 1000  
 - ALL JOINTS TAPED

### VAPOR BARRIER (VB):

- SIGA MAJREX OR INTELLO PLUS STANDARD  
 - ALL JOINTS TAPED

### WINDOWS & DOORS:

- ALL EXT. WINDOWS & DOORS TO HAVE 1 7/8" TRIPLE GLAZING (U - 14 / SHGC - .56)  
 - GARAGE DOORS TO BE INSULATED  
 - ALL OPENINGS TO BE WRAPPED, TAPED & SEALED

### MISCELLANEOUS:

- ALL INTERIOR WALLS @ BEDROOMS, BATHROOMS, STUDIO & OFFICE TO BE INSULATED

### GENERAL NOTES:

1. SUBCONTRACTORS TO REVIEW DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO PROCEEDING W/ CONSTRUCTION.

2. ALL DIMENSIONS ARE TO OUTSIDE FACE OF CONC. FACE OF MASONRY, FACE OF STUD UNLESS INDICATED W/ A CENTERLINE (C) SYMBOL OR UNLESS NOTED OTHERWISE.

3. SEE WALL SECTIONS FOR FURTHER DIMENSIONAL RELATIONSHIPS.

4. ALL EXCESS MATERIALS ARE TO BE DIVERTED FROM THE LANDFILL WHEREVER POSSIBLE.

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DOOSAN

HP450  
VHP400

TEREX

POSITIVE TRACK

COLORADO GEOTHERMAL  
DRILLING

PETROCK DRILLS



